

CLAIM LISTING:

1. (Currently amended) An optical wave guide comprising a core, wherein said core comprises a polymer and at least one organic compound ~~introduced~~ dissolved therein, ~~characterized in that~~ wherein the organic compound is selected from the group consisting of

(1) an isocyclic [[a]] condensed aromatic ring system compound (i) consisting of two or more isocyclic rings ring-systems and (ii) consisting of carbon and hydrogen atoms; and

(2) a heterocyclic condensed aromatic ring compound, system of wherein said heterocyclic aromatic [[rings]] ring compound contains at least one heteroatom selected from the group consisting of nitrogen and oxygen, in which said heteroatom replaces a ring carbon atom of at least one of said two or more isocyclic rings, wherein each heteroatom is selected from the group consisting of nitrogen and oxygen and is assigned to precisely one ring if the ring is heterocyclic.

2. (Currently amended) The optical waveguide according to claim 1, characterized in that the condensed aromatic ring system compound comprises three or more rings.

3. (Previously presented) The optical waveguide according to claim 2, characterized by an angular arrangement of the rings in the condensed

aromatic ring system.

4. (Previously presented) The optical waveguide according to claim 1, characterized in that at least one heteroatom is nitrogen.

5. (Currently amended) The optical waveguide according to claim 1, characterized in that the condensed aromatic ring system compound is selected from the group consisting of phenanthrene, fluorene, ~~benzanthracene~~ benzanthracene and triphenylene.

6. (Currently amended) An optical wave guide comprising a core, wherein said core comprises a polymer and at least one organic compound, wherein the organic compound is selected from the group consisting

~~The optical waveguide according to claim 1, characterized in that the condensed aromatic ring system is selected from the group consisting of benzoquinoline, 1,10-phenanthroline, phenanthridine, and 1,7-phenantroline~~ 1,7-phenanthroline.

7. (Currently amended) An optical wave guide comprising a core, wherein said core comprises a polymer and at least one organic compound, wherein the organic compound is selected from the group consisting

~~The optical waveguide according to claim 1, characterized in that the condensed aromatic ring system is selected from the group consisting of 1,2-benzioxazole~~

1,2-benzoxazole and ~~benzofurane~~ benzofuran.

8. (Previously presented) The optical waveguide according to claim 1, characterized in that the condensed aromatic ring system is selected from the group consisting of anthracene, 2,3-benzanthracene, and 11H-benzofluorene.

9. **(Canceled)**

10. (Previously presented) The optical waveguide of claim 1, wherein the polymer is polymethylmethacrylate or polyester.

11. (Previously presented) The optical waveguide of claim 5, wherein the polymer is polymethylmethacrylate or polyester.

12. (Previously presented) The optical waveguide of claim 6, wherein the polymer is polymethylmethacrylate or polyester.

13. (Previously presented) The optical waveguide of claim 7, wherein the polymer is polymethylmethacrylate or polyester.

14. (Previously presented) The optical waveguide of claim 8, wherein the polymer is polymethylmethacrylate or polyester.

15. (Previously presented) The optical waveguide of Claim 1, wherein the organic compound is a condensed aromatic ring system of two or more isocyclic ring systems.

16. (Previously presented) The optical wave guide of Claim 15, wherein the condensed aromatic ring system comprises three or more rings.

17. (Currently amended) The optical waveguide according to claim 1, characterized in that the condensed aromatic ring system compound is selected from the group consisting of phenanthrene, fluorene, triphenylene, benzanthrane, ~~2,3-benzanthracene~~, 2,3-benzanthracene, anthracene, and 11H-benzofluorene.

18. (Currently amended) An optical wave guide comprising a core, wherein said core comprises a polymer and at least one organic compound, wherein the organic compound is selected from the group consisting
~~The optical waveguide according to claim 1, characterized in that the condensed aromatic ring system is selected from the group consisting of benzoquinoline, 1,10-phenanthroline, phenanthridine, 1,7-phenantroline~~1,7-phenanthroline, 1,2-benzioxazole 1,2-benzoxazole and ~~benzofurane~~ benzofuran.

19. (Currently amended) An optical wave guide comprising a core, wherein said core comprises a polymer and at least one organic compound,

~~wherein the organic compound is selected from the group consisting~~ The optical waveguide according to claim 1, characterized in that the condensed aromatic ring system is selected from the group consisting of benzoquinoline, 1,10-phenanthroline, 1,7-phenantroline 1,7-phenanthroline, 1,2-benzioxazole 1,2-benzoxazole and benzofurane benzofuran.

20. (Currently amended) An optical wave guide comprising a core, wherein said core comprises a polymer and at least one organic compound, wherein the organic compound is selected from the group consisting ~~The optical waveguide of Claim 19, wherein the aromatic ring system is selected from the group consisting of benzoquinoline, 1, 10-phenanthroline, 1,7-phenantroline 1,7-phenanthroline , and 1,2-benzioxazole 1,2-benzoxazole.~~

21. (New) The optical waveguide of Claim 1, wherein the heterocyclic condensed aromatic ring compound consists of carbon, hydrogen and an at least one heteroatom which is selected from the group consisting of nitrogen and oxygen.

22. (New) The optical waveguide of Claim 1 comprising a core consisting essentially of a polymer and at least one organic compound dissolved therein, wherein the organic compound is selected from the group consisting of (1) an isocyclic condensed aromatic ring compound (i) consisting of two or more

isocyclic rings and (ii) consisting of carbon and hydrogen atoms; and
(2) a heterocyclic condensed aromatic ring compound, wherein said heterocyclic aromatic ring compound contains at least one heteroatom selected from the group consisting of nitrogen and oxygen, in which said heteroatom replaces a ring carbon atom of at least one of said two or more isocyclic rings, wherein each heteroatom is assigned to precisely one ring if the ring is heterocyclic.